

Same claim, same line, after "group" delete "and the hetero-".

Same claim, after structural formula 1, line 44, before "for" delete "cyclic group".

### **REMARKS**

As a result of the foregoing amendment, the specification has been amended to correct the abstract. It is submitted that the title of the application is sufficiently descriptive of the invention and need not be modified.

In addition, the claims have been amended to delete the possibility that  $R^1$  and  $R^2$  are heterocyclic groups.

Referring to the rejection of claims 22-36 under the first paragraph of 35 U.S.C. §112, it is submitted that this rejection is improper and should be withdrawn. The examiner asserts that while the specification is enabling for  $Y^1$  being a heterocycle, it does not reasonably provide enablement for  $R^1$ ,  $R^2$  and  $Y^2$  being heterocycles. However, it should be noted that there are no claims wherein  $Y^2$  can be a heterocyclic group. Accordingly, this assertion is incorrect. Moreover, in view of the amendment,  $R^1$  and  $R^2$  cannot be heterocyclic groups. Accordingly, this rejection is untenable and should be withdrawn.

Reconsideration and withdrawal of the rejection of the claims as being unpatentable under 35 U.S.C. §103(a) over JP '182 or the Ichihara et al article are requested.

The examiner asserts that the abstract of JP '182 embraces the presently claimed compounds with permitted values of  $R^1$ ,  $R^2$ ,  $Y^1$  and  $Y^2$ .

As to the Ichihara et al article, the examiner asserts that it teaches the compound NCO-700 with epoxy succinimide attached to one side to an ester and on the other side to a heterocycle joined through an amide bond. The heterocycle piperazine is further attached to an aromatic ring. It is further asserted that this art describes the use of the compounds as protease inhibitors and that the instant compounds bear a striking resemblance to this prior art. The examiner finally asserts that in the absence of applicants showing the criticality of the minor difference, the instant compounds are rendered obvious over this reference.

It is submitted that the examiner's understanding of JP '182 is incorrect. Thus, this reference does not teach a formula which has an epoxysuccinic acid amide inhibiting Cathepsin B with a scope and content which embraces the presently claimed compound. The reference does not cover the claimed compounds with the permitted values of  $R^1$ ,  $R^2$ ,  $Y^1$  and  $Y^2$ . Enclosed is a copy of the first page of the cited JP '182 as well as a copy of the cover page of the corresponding U.S. Patent 5,281,717. It should be noted that the epoxysuccinic acid derivative of formula I has a -CO- bonding between the -NCH- group and the heterocyclic group as marked on the attached copy. The present formula as claimed does not contain such a structure. The absence of this carbonyl group constitutes a significant structural difference from a chemical standpoint. Consequently, the assertion of obviousness based on this reference is improper.

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With respect to the rejection of the claim as being unpatentable over Ichihara et al, here again, the compound NC)-700 is excluded from the formula of the claims of the present application. Enclosed is a copy of the first page of the citation in which the formula of NCO-700 is described. Please note that this formula also has a -CO- bonding the asymmetric carbon atom and the piperazine ring as shown on the attached copy. The presently claimed compound does not contain such a structure.

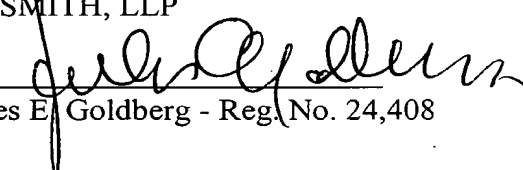
Here again, the absence of the O linkage represents a significant structural difference which takes the presently claimed compound outside of the scope of even compounds which might be suggested by the reference. Accordingly, the rejection on each of these references is untenable and should be withdrawn.

In view of the foregoing, it is submitted that this application is now in condition for allowance and favorable reconsideration and prompt notice of allowance are earnestly solicited.

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Encls.: -New Abstract

- Copy of the first page of the cited JP '182 as well  
as a copy of the cover page of the corresponding U.S. Patent 5,281,717.
- Copy of the first page of the citation in which the formula of NCO-700 is described.

Respectfully submitted,  
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